# FUNDING THE UNIVERSITIES AND THE 1982-84 TRIENNIUM — WHERE DID THE MONEY GET TO?

#### Where Does the Public Dollar Go?

There is a public interest in the way governments distribute public money to competing public services. Any government concern for economies in the system automatically brings forth a consideration by planners of the effectiveness of each marginal increment of funding into the institution. The institutions naturally feel that accountability is justified in the stiff competition for funding and go to some degree of effort to justify a submission for funds. However, all of this concern is only for the direct application of funds as beyond this first round application of the state dollar a whole chain of linked industries are sustained, and money, once into the system, keeps going around, until the original impact becomes a minimum. The effect is similar to that of a stone thrown into a pond.

Thus the impact of other rounds of funding should be mentioned in the case of provision of funds, or

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to justify cutbacks, in the manner of an economic impact statement. The claim for funding should be, not where did the money go, but where did it get to, where did it reach, and who else obtained benefits from the grant dollar. The measure of the effectiveness of industries to involve the wider community should be important in the funding argument, particularly when job creation schemes present a further demand on government funds.

The Case for Funding as set out by Planners

Universities are required to make a case to the Commonwealth Tertiary Education Commission (CTEC) for funding, teaching and research activity over a triennial period. A subsmission is made on what the universities believe they would like to do, based on their perception of what they expect to get in the funding competition. The CTEC evaluates the submission against other demands and makes recommendations to the government for

TABLE 1.
GRANTS FOR TERTIARY EDUCATION, APPROVED FOR 1981, RECOMMENDED FOR 1982-84 TRIENNIUM
AND GUIDELINES FOR 1982-84 TRIENNIUM

Sector/		198	2	1983		1984	
Category	1981(a)	Volume 1	Guide- lines	Volume 1	Guide- lines	Volume 1	Guide- lines
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
UNIVERSITIES AND C	AEs						•
Recurrent	1,566.5	1,583.3(b)	1,588.4	1,587.2(b)	1,558.4	1,586.2(b)	1,588.4
Equipment	62.9	75.4	67.1	81.5	(c)	87.8	(C)
Capital	40.4	56.0	34.8	56.0	(c)	56.0	(c)
Total	1,699.8	1,714.7	1,660.3	1,724.7	(c)	1,730.0	(c)
TAFE							
Recurrent	77.7	84.7	84.6	88.4	(c)	91.7	(c)
Equipment	_	12.3	10.1	12.3	(c)	12.3	(c)
Capital	117.4	117.4	112.1	117.4	(C)	117.4	(c)
Total	195.1	214.4	206.8	218.1	(c)	221.4	(c)
TOTAL							
Recurrent	1,644.6(d)	1,668.4(d)	1,643.45(e)	1,676.0(d)	(c)	1.678.3(d)	(c)
Equipment	62.9	87.7	77.2	93.8	(c)	100.1	(c)
Capital	157.8	173.4	146.9	173.4	(c)	173.4	(c)
Total	1,865.3	1,929.5	1,867.55	1,943.2	(c)	1,951.8	(c)

<sup>(</sup>a) The figures are expressed on a comparable basis to the grants for the 1982-84 triennium (see paragraph 3.5 for further details).

Source: CTEC Report for the 1982-84 Triennium, Canberra, 1981.

funding. Governments send down guidelines for funding and so specify teaching, research and capital equipment projects within a CTEC design for the whole sector. Proposals from the CTEC are then examined and assessed against other demands for the use of government funds in all other areas of government provision, including health and welfare and other services.

The decision making process shows the bias of the groups of planners involved. CTEC is concerned for the impact on educational and research structures and the Federal Government is concerned for the distribution of funding over the full range of government services. It can be said that no one in this system of planning has any concern or exact knowledge of the interrelated industries that serve the front of the education industry, and any decisions that are taken are largely ignorant of the true nature of their impacts on the community.

Educational Facility or Industrial Efficiency

This interaction between governments and CTEC is published in the reports of CTEC<sup>2</sup> and the arguments for the quality of education services from academics are offset against a government concern for the use of scarce funds. The report for the 1982-1984 triennium showed the differences between CTEC's recommendations and the Federal Government's guidelines.

In a climate of declining funding CTEC expressed concern that funding could be below that base

level beyond which lack of funds would destroy the public resource that had been built up at greater previous expense.

The impact of the rate of funding and the scale of funding needs to be looked at in terms of the type and location of the institution. Funds that are given to universities and all tertiary institutions are spent outside the institution in the community, and so support service jobs, providing income to other industry sectors and the other benefits of employment in the community. And changes in funding will change the fortunes of those supported service jobs. A triennium submission to CTEC is thus a submission for the whole industry. In any submission the effectiveness of the grant to the institution is valued, but when universities are viewed as industrial processes, the economic and social influences of a grant vary with type and location of institution. The impact of spending is marked where the city or town in which the institution is located is small and the impact of the University of New England on the city of Armidale is considerable compared with that of the metropolitan universities in Sydney. In times of recession a government is inclined to compare the effectiveness of each dollar invested and the justice of the cutbacks should be assessed against the ability of the grant to generate income and employment. One may ask: do the cuts create a more efficient structure by eliminating surplus or do the cuts mean a loss of the previously built up educational facility? And of

					TABL	E 2								
7	THE TRA	ANSAC	TIONS	TABL	E FO	RTHE	CITY	OF ARI	VIDAL	E 1968				
o E E	Manufacturing	Utilities	Building	Transport	Communications	Commerce	Public Authority	Business Services	Personal Services	University	University Population	Households	Unallocated	Outside
INPUTS 7	ŏ -:	6	က်	4.	ιņ	Ö	7	∞.	9	<del>6</del> .	Ξ.	5,	$\frac{\epsilon}{\epsilon}$	4
Manufacturing     Utilities     Building     Transport     Communication     Commerce     Public Authority     Business Services     Personal Services     University     University     Households     Unallocated	272 39 0 111 35 400 94 24 2 0 0 858	10  0  22 0 0 0 0 0 217	768 50 644 93 16 1690 30 9 7 0 0	2 	0  0 0 0 5 0 0 0 5 0 0	147 141 159 384 183 3100 59 52 14 0 0 4185	61 11 3 14 22 0 0 0 0 0 0 0 2061	238 284 223 156 91 588 482 83 5 0 0 2549	29 71 291 49 19 997 413 32 1 0 0	20 189 3195 66 71 334 35 9 0 4662 8	93 164 104 50 79 2353 15 354 217 1448 0 82	720 — 1772 — 3407 11358 5 321 0 0		1888 
14. Outside	2158	_	179	_	_	909	0	3391	615	1875	996	_		_

<sup>(</sup>b) Includes provision for research centres of excellence.

<sup>(</sup>c) Not applicable.

<sup>(</sup>d) Includes \$400,000 for evaluative studies.

<sup>(</sup>e) Includes \$450,000 for evaluative studies.

course, the losses will be passed on to the future since education and training are components of future industrial development.

Where Does the Money Go?

Universities may be considered in various ways: firstly as educational institutions carrying out teaching and research services for the community. This is how CTEC regards them. Lane<sup>3</sup> sees them as models of autonomy and organisational behaviour. Bryant<sup>4</sup> in the University of New England study shows them as models of industrial activity, using goods and services and forming patterns of economic interdependence with the surrounding

community. An explanation of this model can provide an insight to the whole tertiary sector and one may see how a grant paid into a university or college is distributed back into the community.

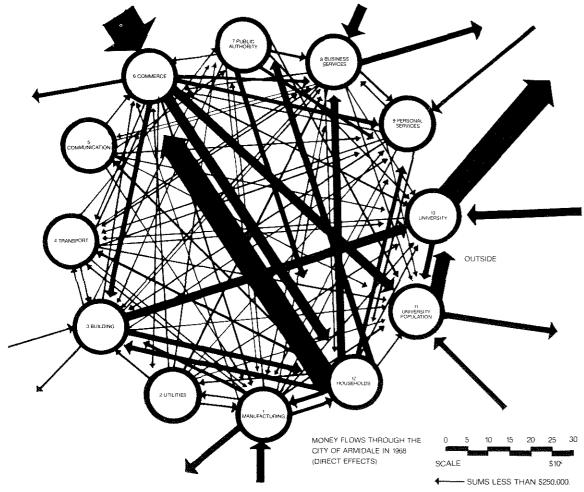
The University as an Industrial Process — The University of New England/Armidale Model

The economic relationship between the University of New England and the City of Armidale was measured in 1971 by the procedure known as Interindustry or Input Output analysis. This approach was pioneered by Leontief, in his measurements of the U.S. economy in 1936 and has since been applied over a range of applications ranging from

## FIGURE 1 TRANSACTIONS IN ARMIDALE - ALL INDUSTRY GROUPINGS

A scale diagram of all transactions for all industry groups including the University of New England and its population in 1968.

Products flow in the direction of the arrow, representing the value of goods, money flows against the arrow meeting goods in the form of payments and income.



national, regional, city and local area studies in many countries. In Australia tables have been produced nationally by the Commonwealth statistician and at the local level, for Muswellbrook, in New South Wales.<sup>7</sup>

The following tables and diagrams taken from the University of New England Study how the university makes purchases of goods and services in Armidale and outside. The diagrams are to scale and may be considered as indicative of the shape of the whole tertiary sector.

Table 2 lists estimates of all transactions in the city

of Armidale for the year 1968 including the university and its population, and these are shown graphically in Figure 1. An explanation of these processes serves to explain the processes of the whole tertiary eduction sector.

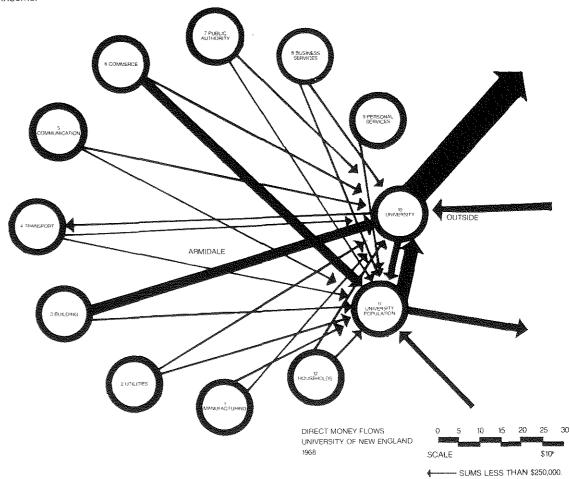
The Transactions Table for the University of New England and the City of Armidale

The Transactions Table is assembled in the following way: Outputs from industry sectors are arranged horizontally, these entries being sales and income of the industry sectors. For example on Row 6 against Commerce, the output of Commerce to the university was sales of \$334,000. This

## FIGURE 2 DIRECT TRANSACTIONS FOR THE UNIVERSITY AND ARMIDALE

A scale diagram of all transactions between the University and its population and all industry groups inside and outside Armidale

Products flow in the direction of the arrow, money flows in the opposite direction meeting goods in the form of payments and income.



entry with regard to the University Sector is termed an Input to the university, a purchase by the establishment to include in its educational process. As an input to the university it is read down column 10. Inputs to particular industries are read vertically.

The Transaction Table is graphically expressed in Figure 1, showing flows of goods and services to scale and indicating readily the relative importance of the linkages between sectors.

Figure 2 separates both the University and the University Population sectors from the background of city activity. The figure represents the global cost for the University of New England for the year 1968 including all the costs for running the establishment and providing the comparison of income. It can be seen that the cost of building a university is almost as great as the cost of staffing it. Universities are continually changing institutions and have a constant building capital works program, and are unlike other organizations such as business administration and insurance where the costs of enclosing the operation are small compared with the total establishment costs of the organization, when office building, plant equipment, salaries, maintenance and similar charges are taken into account. In the case of universities there is a constant building and equipment charge over the life of the organization and the cost is great compared with the total establishment costs.

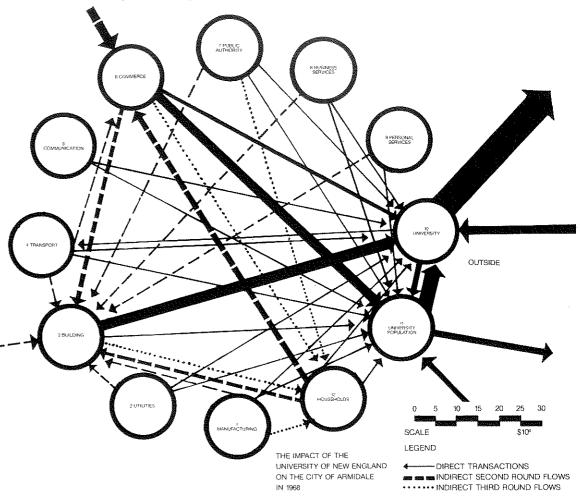
It can be seen in Figure 1 that changes in the outputs of Commerce correspondingly change the level of its inputs from other industries, notably Households, Outside and Transport. A similar description can be made for Building, which is the other significant sector in the University process, since universities are continually building.

The amount of the purchases transactions of the Commerce Sector attributable to the university would be proportional to the purchase of its goods by the university and its population. If the University of New England were to change, the increase in purchases made by Commerce to meet this demand would be proportional to the input ratio. Thus the effects of the university on the city, are the total of the direct transactions together with the successive iterations of proportional flows from the other sectors. The influence of the university may be thought of as the way in which it changes the level of purchases in linked industry sectors to accommodate new levels of university output. Figure 3 shows both these direct and indirect effects of the University and the University Population sectors. It is constructed by tracing back flows to sectors and applying ratios of inputs and outputs to reduce flows in subsequent rounds to a minimum. This diagram shows the iterative effect of the direct transactions as impacts move successfully through rounds of transactions in linked sectors to become minimal.

THE IMPACT OF T  The table lists  SLOAL  INPUTS  1. Manufacturing 2. Utilities 3. Building 4. Transport			ansacti 3. Bnilding										13. Unallocated	14. Outside
INPUTS  1. Manufacturing 2. Utilities 3. Building 4. Transport	Manufacturing	Utilities	3. Building	Transport	Communication	Commerce	Public Authority	Business Services	Personal Services	University	University Population	Households	(3)	
Manufacturing     Utilities     Building     Transport			ෆ්		-	-		Business					(3)	
Manufacturing     Utilities     Building     Transport	<del>`</del>			4.	ιςi	9	7	œ	တ်	Ö	i	23	5	4
Utilities     Building     Transport			070	A.V-1-1-1-100-1-1-1						1				
5. Communication 6. Commerce 7. Public Authority 8. Business Services 9. Personal Services 10. University 11. University Population 12. Households 13. Unallocated 14. Outside	0	0	372 24 312 45 8 820 15 4 4 0 0 660	31 0	0 0	29 28 32 77 37 620 12 10 3 0 0 835	0	0	0	20 189 3196 66 71 334 35 9 0 4623 8	93 164 104 50 79 2353 15 354 217 1448 0 82	13 — 312 — 600 440 0 58 0 0		8198 1464

FIGURE 3
THE IMPACT OF THE UNIVERSITY OF NEW ENGLAND ON THE CITY OF ARMIDALE

A scale diagram of direct transactions, and the induced second and third round indirect flows. Products flow in the direction of the arrow representing the value of goods, money flows against.



The process of impacts through successive rounds would be characteristic for the whole industry sector and the relative scales of the flows of goods to sectors would be likely to occur for both country and metropolitan universities and for the whole university industry. A study of this diagram is relevant to any argument concerning losses of income and jobs in the education industry since it shows the process of grants through the institution and the manner in which they affect the community.

This diagram shows how the large purchase from Households is generated by Commerce and involves the Household sector in the university pro-

cess. It shows how additional service jobs are generated and the payment of Salaries to the community. It shows how additional service jobs are generated and the payment of salaries to the community. It shows how significant payments to Households occurred in the payment of sums to the Building sector. This activity so generated in commerce also generated more building and the large payment from Commerce is evident to cover this. The diagram also shows how the university had the greatest income from outside, whilst Commerce had the greatest purchases. And the influence on the city took place through the Building Sector for the University and the Commerce Sec-

tor for the university population. Both these flows are comparable in size and are greater than most other city processes with the exception of the payments from Commerce to Households in the form of wages.

The two sectors Commerce and Households are highly linked to the rest of the city and changes in the level of activity in the university quickly affects other sectors.

Labour Impacts of a University

Table 4 lists all labour inputs associated with the university process for the year 1968 and represents the sum of both direct and indirect inputs. For that year, the University of New England used 36.4% of the total workforce in Armidale and for each full time student enrolled, 1.3 service jobs were sustained. The study shows how marked the impact of a university can be on a small country town and what at first sight would appear to be a service industry, is shown to perform in an export earning way. The impact of a large metropolitan university would not be as marked on say the cities of Melbourne or Sydney and the effects would be obscured by the scale of other central functions. Armidale also provides the opportunity of a distinct boundary to isolate and measure flows of goods and money inside and out, for this, would be obscure in the metropolitan situation. However, the input-output ratios gathered in Armidale at that time represent the whole university industry and could be extrapolated to give some estimate of the total situation for that time.

TABLE 4

LABOUR INPUTS TO THE UNIVERSITY PROCESS,

SECTOR	LABOUR INPUTS (MAN YEARS)
Manufacturing     Utilities     Building     Transport     Communication     Commerce     Public Authority     Business Services     Personal Services     University	9.6 33 296 30.6 50.5 201 2 152 143 1,059
TOTAL	1,977

Estimates for Present Levels of Activity in the University Industry

The relationship between the universities and the service industries has no doubt changed since 1968 and a current study is required for the whole tertiary sector. The input output ratios developed in the UNE/Armidale study are used here to develop first estimates for the sake of argument about the likely impact of the cuts to education. They provide

an indication of problems that are present outside the institutions. To date this has not been mentioned in literature concerning the funding crisis in tertiary education.

Table 1, taken from the CTEC report for the 1982-84 triennium outlines the difference between the government guidelines and the CTEC recommendations for funding. The CTEC recommendations are probably modest in terms the economic climate of the earlier part of the triennium, however the difference between the two sets of figures can be regarded as a loss to the whole industry. The figures are used as data and coupled with UNE/Armidale ratios to provide estimates of the impacts of both sides. The UNE/Armidale model provides the pattern and scale of economic interdependence for the whole university industry and the scale of the previous Figures serves for the estimates. The following Tables describe the impacts of the fundina levels.

Table 5 is calculated using the ratios and the inputs given in the government guidelines.

Table 6 calculates the impacts generated by CTEC recommendations.

Table 7 is the difference between the two estimates and represents the losses to the industry generated by government cutbacks.

Table 8 provides an estimate of all labour inputs into the whole University industry for 1980 based on the University population levels given in the CTEC report for 1982-84.

Table 9 is an estimate of the jobs lost by the cutbacks of funds indicated in the government guidelines. The estimate here is based on the staffing and funding levels for the universities for 1980 and assume that the input output ratios of the UNE/Armidale study remain unchanged for the present time.

Such losses are notional and serve to indicate the pressure on industry sectors brought about by funding cutbacks.

Time and the elasticity of associated industries would determine the extent of job losses and how quickly they might pick up in a recovery. There would be some delay in reaction between cuts at government level and losses in the industry.

#### Where Did the Money Get To?

As to where the money went, it certainly did not remain locked up in the institutions as some would think but was spent outside in the community generating jobs and income. This, as well as the internal activity of education, deserves mention in the funding debates.

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						TA	BLE 5								
	AN ES	TAMITE	E OF	THE E	FFECT	OF TH	E PRE\	/IOUS (	GOVEF	NMEN	T GU	IDELIN	ES		
Money flows in thousa	nds of d	ollars.													
INPUT	TUTPUT	1. Manufacturing	2. Utilities	3. Building	4. Transport	5. Communication	6. Commerce	7. Public Authority	8. Business Services	9. Personal Services	10. University	11. University Population	12. Households	13. Unallocated	14. Outside
Manufacturing     Utilities     Building     Utilities     Building     Transport     Communication     Commerce     Public Authority     Business Services     Personal Services     University     University     House	On On	0 0	0 0 133	5330 4860 3180 9112.5 1620 6050 3037.5 810 0 0 3650	6277.5	12 0 0	5872.5 5670 6480 13365 7492.5 25550 2430 2025 607.5 0 0 0 59087.5	0	0	3 64 1 1 6 0 0 93	4050 8272_5 7190 3365 4377.5 7635 7087.5 1822.5 0 0 6157.5 1620	18833 33210 21060 10125 15998 475483 3036 7169 43943 293220 0 16605	2633 63180 		1660095 296560

						TA	ABLE 6								
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Manufacturing     Utilities     Building     Transport     Communication     Commerce     Public Authority     Business Services     Personal Services     University		0	0	77748 5016 65208 9405 1672 171380 3135 836 836	6479	0	6061 5852 6688 16093 7733 129580 2508 2090 627 0	0	0	0	4180 39501 667964 13794 14839 69806 7315 1881 0	19437 34276 21736 10450 16511 491777 3135 73986 45353 302632	2717 — 65208 — 125400 91960 0 12122 0		1713382
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Money flows in thousand	ds of dol	lars.													
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TABLE 8

### AN ESTIMATE OF LABOUR INPUTS INTO THE UNIVERSITY INDUSTRY FOR 1980

SECTOR	LABOUR INPUTS (MAN YEARS)
Manufacturing	106
2. Utilities	368
3. Building	3,294
4. Transport	340
5. Communication	562
6. Commerce	2,237
7. Public Authority	23
Business Services	1,690
<ol><li>Personal Services</li></ol>	1,591
10. Universities	11,782*
TOTAL	21,933
	***************************************

\*CTEC Report for 1982-84 Vol. 2, Part 2 Advice of Councils August 1981.

#### TABLE 9

## LABOUR INPUTS LOST IN THE CUTBACKS TO THE UNIVERSITY INDUSTRY FOR THE YEAR 1982

SECTOR	LABOUR INPUTS (MAN YEARS)
Manufacturing	5
2. Utilities	17
<ol><li>Building</li></ol>	152
4. Transport	16
<ol><li>Communication</li></ol>	26
6. Commerce	103
<ol><li>Public Authority</li></ol>	1
Business Services	78
<ol><li>Personal Services</li></ol>	74
10. Universities	1,017
TOTAL	1,489

## THE UNIVERSITY OF THE SOUTH PACIFIC: CONTEXT, PURPOSE & PROSPECT

For the last four hundred years, Europeans took their cultures, their languages and themselves to the farthest reaches of the planet, in the most extensive cultural and demographic diaspora in human history. Now that societies around the world are slowly emerging from their colonial cocoon, old, implanted institutions, developed in Europe for European needs, are being challenged to come to terms with new conditions and rising expectations in the Third World.

Along with the separate armed forces, the national airline, and overseas delegations, the newly independent states have founded educational establishments to prepare their populations to cope with the information and other revolutions that are currently transforming societies everywhere. Primary and secondary education are artefacts of the colonial era, while higher education is largely a post-World War II phenomenon. This increase in post-secondary education has been world-wide. shared by countries both rich and poor. Most of the world's six thousand post-secondary institu-tions are of recent origin. Of these, some 743 are universities,2 with nearly half being in the Commonwealth alone.<sup>3</sup> By member institutions, the majority (82) are in Asia, with smaller numbers in Europe (55), Canada and the Caribbean (45), Africa (30), and Australasia and the Pacific (29).

The insular South Pacific, with its fifteen states and territories (see Table 2 and Figure One) is as divided today as it was one hundred years ago, though discernable blocks related to first and second world powers have certain similarities, particularly in terms of the post-secondary establishments that serve them.

Roughly speaking, American dominated Micronesia (and Samoa) has the University of Guam, Australian oriented western Melanesia has the University of Papua New Guinea (UPNG), but the French speaking islands have only technical colleges, the university sector being located in metropolitan France itself. The countries of central and western Polynesia, and eastern Melanesia, heavily influenced by New Zealand, even in primary and secondary school curricula and examinations, rely on the University of the South Pacific (USP) to serve as the modern training centre for their various national elites.

This article focuses on the University of the South Pacific (USP), located in Fiji just outside Suva, a Third World University with just over a decade of life and, along with the University of the West Indies in the Caribbean, one of the few multinational institutions of its kind. Before going on to

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present some features of USP, I provide the Pacific context for its development and current operation. In my discussion below, I do not propose to attempt for USP what Howie-Willis and Meek do for UPNG.<sup>5</sup> Rather, I sketch in outline the main known features of the story, especially as they relate to current operations. My closing remarks regarding questions of academic freedom and institutional purpose are intended as an appraisal of the operation of USP, based upon my personal association with it.<sup>6</sup>

Pacific Post-Secondary Institutions

The most comprehensive listing of post-secondary and vocational training for the Pacific was produced in loose-leaf form in 1978, as a joint project of the South Pacific Commission and the International Labour Office. Using the International Standard Classification of Occupations (ISCO), the Directory lists details of 900 programmes, from University courses to short-term, in-service exercises, given in government departments. The courses offered by the universities, colleges, institutes, schools, and centres cover a broad range from Agriculture to Zoology. Most of the 139 institutions tend each to have an area of concentration, with the exception of the 7 multi-purpose establishments. As multi-purpose, I would list the following:

American Samoa Community College
'Atenisi Institute
Community College of Micronesia
Papua New Guinea University of Technology
University of Guam
University of Papua New Guinea
University of the South Pacific

Excluding those seven, the remaining 132 government and privately run institutions in the French and English speaking parts of the Pacific tend to concentrate in the following areas:

TABLE 1: Classification of post-secondary institutions in the South Pacific

Type of Training	Number
Trades	44
Health Workers	29
Agricultural & Fisheries	19
Teacher	16
Clerical	13
Religious	11
TOTAL	132

Table 2 shows the number of such institutions in each country or territory, the population most directly served, and the ratio of population to post-secondary institutions.